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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,188

08/30/2005

Shinichi Funatsu

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EXAMINER

WOOD, ELLEN S

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,188	Applicant(s) FUNATSU ET AL.	
	Examiner ELLEN S. WOOD	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugawara et al. (JP2000-0352479, hereinafter "Sugawara").

In regards to claim 1, Sugawara discloses a resin lining for a steel pipe [0001]. The resin of the lining is a modified polyolefin resin [0007]. An adhesive is added to the inner surface of the pipe to enhance the adhesion strength of the lining to the steel pipe [0011]. The adhesion strength between the steel pipe and the plastic layer is 4.0 MPa, which is greater than 2.0 MPa [table 3]. The steel pipe may have an inner surface treatment [0017].

In regards to claim 2, Sugawara discloses that a modified polyolefin resin is used as the lining for the steel pipe [0007].

In regards to claim 3, Sugawara discloses that the adhesive can be that of a maleic anhydride modified polyolefin resin, ethylene maleic anhydride copolymerization resin, ethylene-methacrylic acid copolymer, ethylene-acrylic acid copolymer, ethylene-vinylacetate copolymer, ethylene maleic anhydride-acrylic ester copolymer, etc. [0013].

Sugawara is silent with regards to the type of surface treatment; the melt end temperature of the adhesive layer is over a usage temperature of said plastic layer and less than a melt start temperature.

Sugawara discloses that inner steel pipe can be pretreated with a surface treatment such as a chemical conversion [0020]. The steel pipe is used for piping, such as feed water, hot water supply, air conditioning, and wastewater, etc. [0001]. It is known to one of ordinary skill in the art that a phosphate chemical treatment is a chemical conversion. The instant applicant discloses that the chemical treatment coating is used for preventing peeling, such as piping used for water supply, hot water supply, air-conditioning, drainage, etc (pg. 3 lines 3-5). Thus, it would obvious to one of ordinary skill in the art to combine the phosphate chemical treatment with the lined steel pipe of Sugawara to produce a pipe that has improved corrosion properties when the pipe is used for water supply, hot water supply, air-conditioning, drainage, etc.

Deleted: drainage

3. Claims 4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugawara et al. (JP2000-0352479, hereinafter "Sugawara") in view of Nippon Paint Co LTD (JP 55123453, hereinafter "55123453").

Sugawara discloses the polyolefin lined pipe as shown previously. Sugawara discloses applying an outer surface treatment to the steel pipe such as pickling or blast processing [0017]. Sugawara discloses that the inner steel pipe can be pretreated with a primer coating [0020]. Sugawara discloses a method for manufacturing an inner surface lining steel pipe where the resin pipe is made to have a smaller inside diameter

than that of the steel pipe [0018]. The resin pipe is inserted into a steel pipe and then heated [0018]. An adhesive layer may be applied to the outer layer of the resin pipe before inserting the pipe into the steel pipe [0016]. The outer diameter of the resin pipe was 26.1 mm and the inner diameter of the steel pipe was 27.6 which would be a little over a 0.8% reduction of the resin pipe. Sugawara is silent with regards to the exact type of primer coating.

55123453 disclose a polyolefin resin lined steel pipes that have an anticorrosive primer layer (abstract). The inner steel pipe has an anticorrosive primer as the first layer, an adhesive layer as the second layer, and a polyolefin resin as the third layer (abstract). The primer composition is that of epoxy (abstract). It would be obvious to one of ordinary skill in art to combine the epoxy layer of 55123453 to the steel lined pipe and the method of manufacture of Sugawara. The motivation would be to create a steel lined pipe with an anticorrosive inner layer when the pipe is used for water supply, hot water supply, air-conditioning, drainage, etc (abstract of 55123453).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ellen S Wood
Examiner
Art Unit 1794

/Carol Chaney/

Supervisory Patent Examiner, Art Unit 1794